



IW-RL400

4U Liquid-Cooled Rackmount Chassis

User Manual

PREFACE

Thank you for choosing the InWin IW-RL400 liquid cooling server. This manual is written for system technicians who are responsible for installation, managing and repairing this server chassis. This document provides an overview of all the features of the chassis, a list of accessories or other components you may need to finish the installation and instructions on adding and removing components in the InWin IW-RL400. For the latest version of this manual, you may visit InWin's server website.

SAFETY INFORMATION

To ensure a safe and smooth operation of your InWin IW-RL400, it is essential that you choose an appropriate location for the system, provide an appropriate operating environment and supply an adequate amount of power for all components of the system. As you plan for installation, follow the guidelines below to ensure that the system and its environment are safely and appropriately positioned for efficient operation and service. Your system should be installed and serviced only by a qualified technician.

Proper Environment Selection:

The system is designed to operate in a typical office environment:

- The location should be clean, dry and free of airborne particles.
- It should be placed in a well-ventilated room, and away from sources of heat including direct sunlight and radiators.
- It should be kept away from sources of vibration or physical shock.
- The space should be accommodated with a properly grounded wall outlet, and with sufficient space to access the power supply cords.
- The operating environment temperature should be around 0°C to 40°C (32°F to 104°F).

Heed Safety Instructions:

Before working with InWin IPC/storage/SMB server products, we strongly recommend you use this guide as a reference and follow the safety instructions. The instructions in this manual will help you ensure and maintain compliance with existing product certifications and approvals. Follow the described, regulated components mentioned in this manual. Use of non-UL listing products or other regulators may not comply with product regulations in the region(s) in which the product is sold.

System Power On/Off:

The power button DOES NOT totally turn off the system AC power. To remove the power of the system, you must unplug the AC power cord from the outlet or the system's power supply units. Make sure the power cord is unplugged before you open the chassis, add or remove any components.

Hazardous Conditions, Devices and Cables:

Hazardous electrical conditions can be present on/in power supply units and their cables. Disconnect the power cord and any other devices attached to the server before opening the case. Failing to follow safety procedures will increase the risk of personal injury or equipment damage.

Electrostatic Discharge (ESD) and ESD Protection:

In most cases, ESD may damage disk drives, electronic boards and other parts. We recommend that you conduct installation only at an ESD free space. If not possible, perform ESD protection protocol by wearing anti-static wrist straps attached to the ground on any unpainted metal surface on your server during operation.

Installing or Removing Jumpers:

A jumper is a short length conductor used to close, open or bypass part of an electronic circuit. Jumpers on InWin backplanes have a small tab on top that you can pick up with your fingertips. Grip the jumper carefully and plug the jumper to cover the jumper pins on the backplane. Once you need to remove the jumper, grip the jumper and carefully pull without squeezing.

**CAUTION**

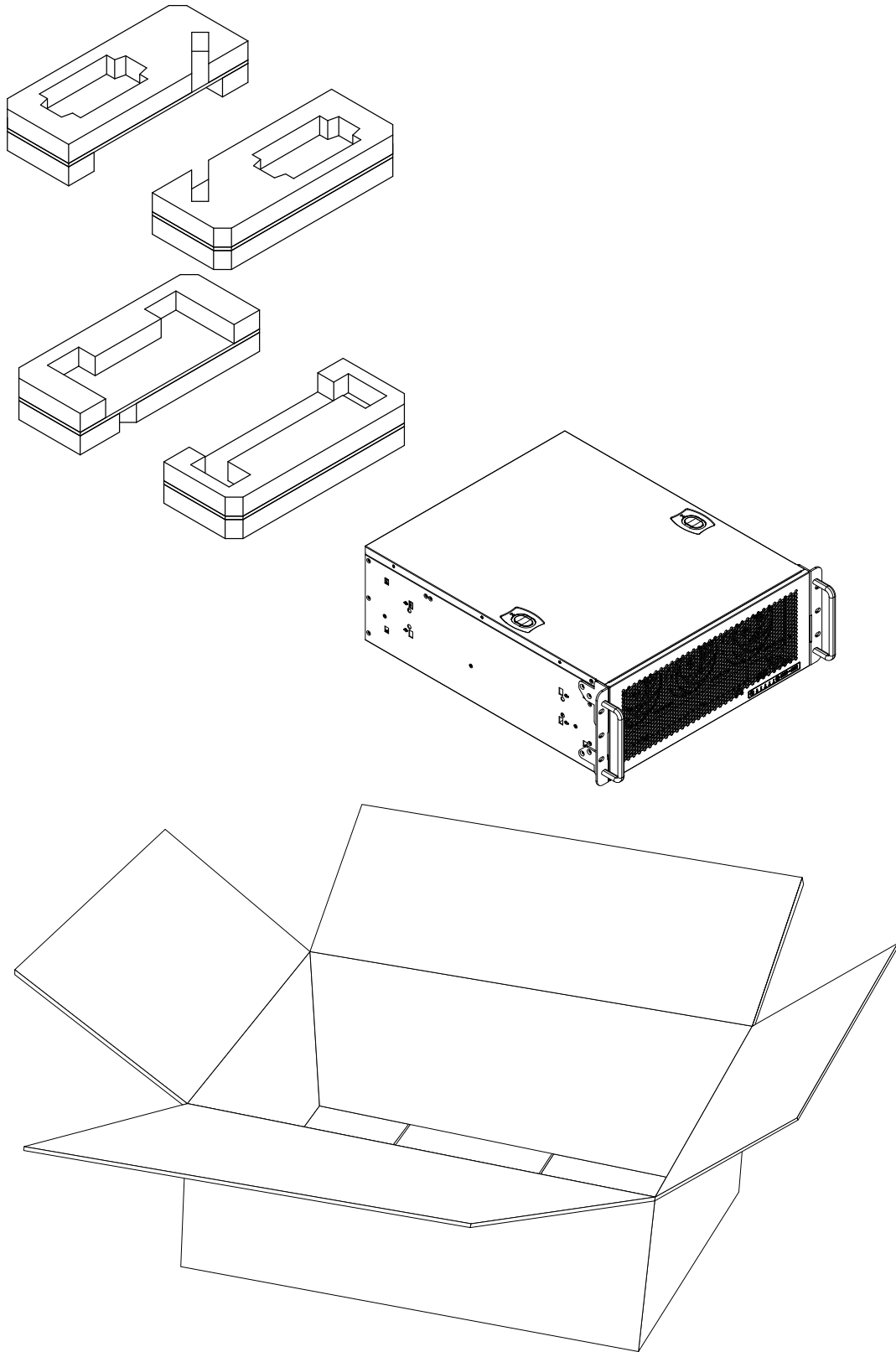
To avoid damage and maintain your safety, please read the following terms listed below:

1. Do not populate hard drives and turn on the power until the system has stabilized. Make sure hard drives and other components are properly connected before turning on the system.
2. Tighten or loosen all screws with a screwdriver.
3. Apply the correct screws packed in the accessories box.
4. For your safety, please have at least two people lift and install the unit in its designated area.
5. Before mounting the unit to the cabinet, make sure the rail is installed correctly.
6. When installing and removing any module or part, please use the handles.

1 Product Introduction

1.1 Box Contents

When you open the IW-RL400 box, the contents should include following:



1.2 Accessories Box

1.2.1 Water Cooling Kit - Package 1: Intel® LGA 4710 (bracket pre-installed)



No.	Item	No.	Item
1	Motherboard Stand-Offs x 14	8	Cable Ties and Mounts x 5
2	Motherboard Screws x 14	9	PWM Fan Extension Cable x 1
3	3.5" HDD Standoff x 1	10	CRPS holder bracket set
4	3.5" HDD screws x 30		10-1 Outer bracket
5	2.5" SSD screws x 4		10-2 upper holder bracket (right)
6	Thumbscrew Caps x 4		10-3 lower holder bracket (left)
7	Thermal Compound x 2		10-4 CRPS holder

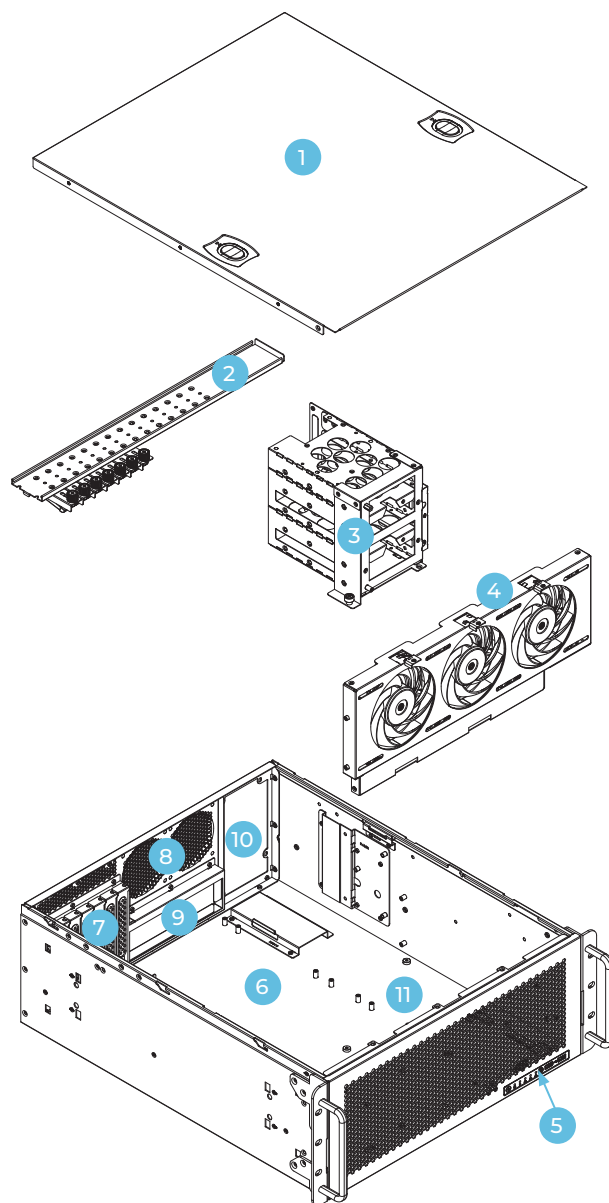
1.2.2 Water Cooling Kit - Package 2: Intel® LGA1851 / AM5



No.	Item	No.	Item
1	Motherboard Stand-Offs x 14	7	Intel LGA 1851 / 1700 CPU Backplate x 1
2	Motherboard Screws x 14	8	Intel Mounting Bracket x 1
3	3.5" HDD Standoff x 1	9	Thumbscrew Caps x 4
4	3.5" HDD screws x 30	10	Standoff Screws (LGA 1851/1700) x 4
5	2.5" SSD screws x 4	11	AMD Mounting Bracket x 1
6	CRPS holder bracket set	12	Standoff Screws (AMD4/AMD5) x 4
6-1	10-1 Outer bracket	13	Backplate Mylars x 2
6-2	10-2 upper holder bracket (right)	14	Thermal Compound x 1
6-3	10-3 lower holder bracket (left)	15	Cable Ties and Mounts x 5
6-4	10-4 CRPS holder	16	PWM Fan Extension Cable x 1

1.3 General Information

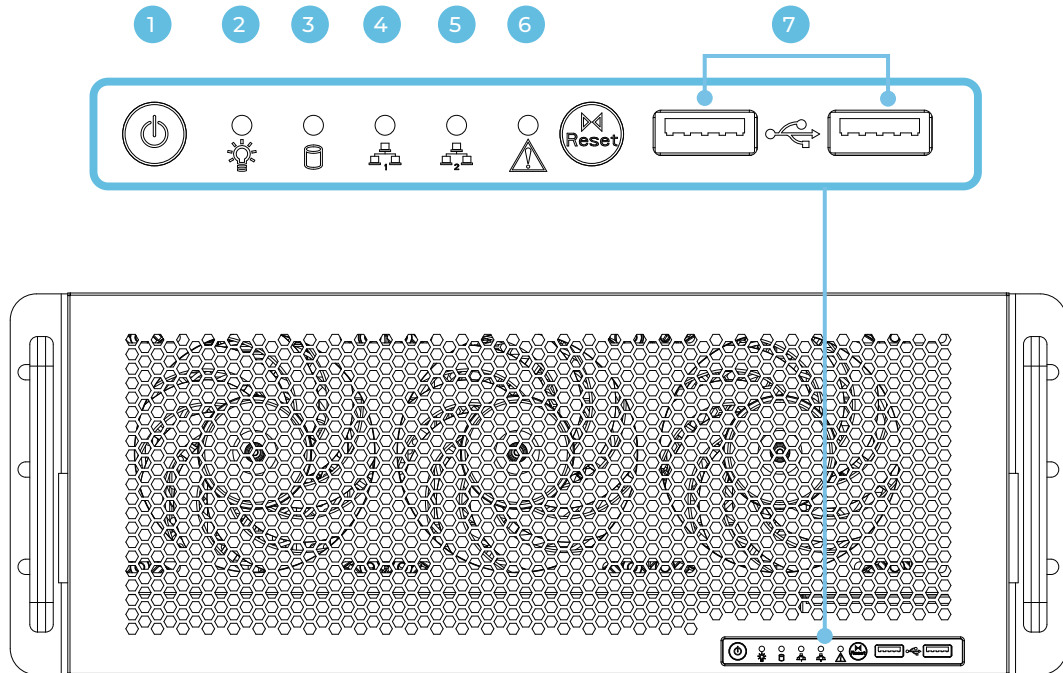
When you open the chassis, it should reflect the diagram's image.



1	Top cover	7	Full-Height PCIe Slot x 8
2	Screwless adjustable GPU holder	8	Optional rear fans mounting area
3	HDD cage	9	Rear I/O shield mounting area
4	360mm AIO liquid cooler (pre-installed)	10	PSU mounting area
5	Front controls and indicator	11	HDD cage mounting area
6	M/B mounting area		

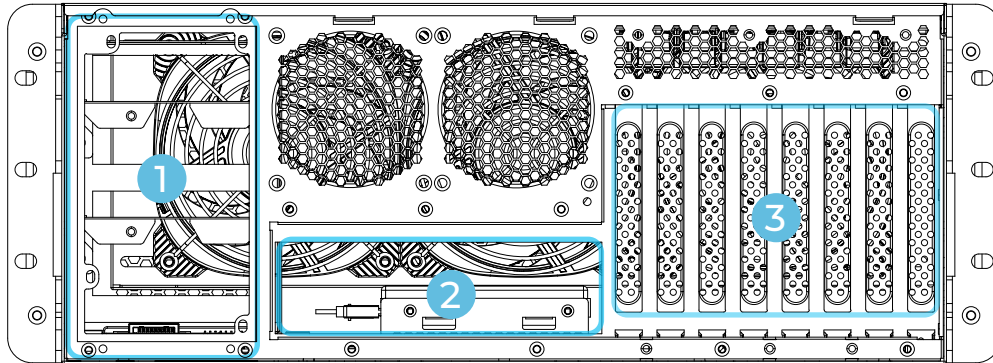
1.3.1 Front Panel Controls and Indicators

The IW-RL400 offer a five-layer 3.5" HDD tray with the option to swap the first layer for a 2.5" SSD. The control panel, indicators are located on the Front Panel.



No.	Name	Color	Status	Description
1	Power On/Off Button	N/A		Press the button to turn the power on.
2	Power LED	Blue	Solid on	System is powered on.
			Off	System is off.
3	Hard Disk LED	Amber	Blinking	System HDD accessing.
4	LAN LED (LAN1 – LAN2)	Blue	Blinking	Link between system and network.
			Off	No data transmission or receiving is occurring.
5	System Fail LED	Amber	Solid on	System Status (- , +).
			Solid on	System Status (+ , -).
6	System Reset Button	N/A		Press the button to activate system reset.
7	USB 3.0 Connector	N/A		USB devices connections.

1.3.2 Rear Panel Configuration



No.	Name	Description
1	Power Supply Window	This window is for installing single PSU, please reference InWin compatibility list to select the compatible models.
2	System I/O (Depends on M/B Specifications)	The I/O shield should come with the motherboard or is provided by motherboard vendors.
3	Full-Height PCIe Slot x 8	The slot supports standard high profile cards. The bracket should be removed before using.

2 Hardware Installation

2.1 Motherboard, LGA4710 AIO & Expansion Card Installation

Before installing the motherboard, please find the I/O shield from your motherboard package and install it into the system I/O window. If you cannot find the I/O shield, please check with your motherboard vendor, or contact InWin for I/O shield OEM service.

For a quick installation video, please visit [MB & LGA4710AIO & GPU Installation](#).

2.2 LGA1851 / AM5 AIO Installation

The IW-RL400 also offers an alternative AIO package designed for Intel LGA1851 and AMD AM5 platforms. This package includes a pre-installed 360 mm AIO, ensuring efficient cooling and a streamlined installation process.

For a quick installation video, please visit [LGA1851 / AM5 AIO Installation](#)

2.3 Storage & Fan Installation

The IW-RL400 features tool-less cage. Users no longer need to use screws to mount the cages. The IW-RL400's offers optional fans and fan kits. User can purchase additionally for installation.

For a quick installation video, please visit [Storage & Fans Installation](#).

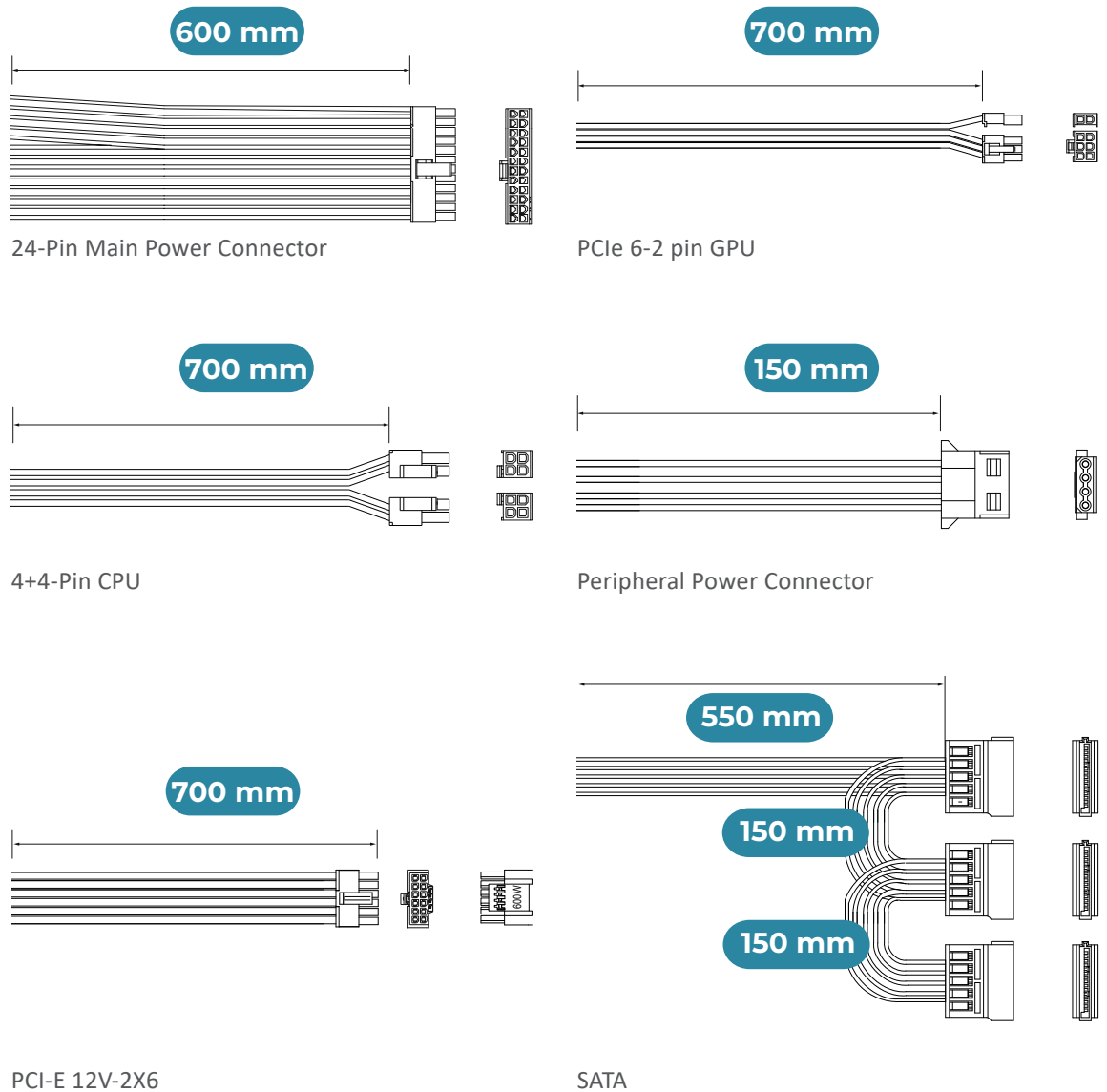
2.4 Power Supply Installation

The IW-RL400 has an option of single or redundant power supply unit. Users can select power supply according to the environment's requirements.

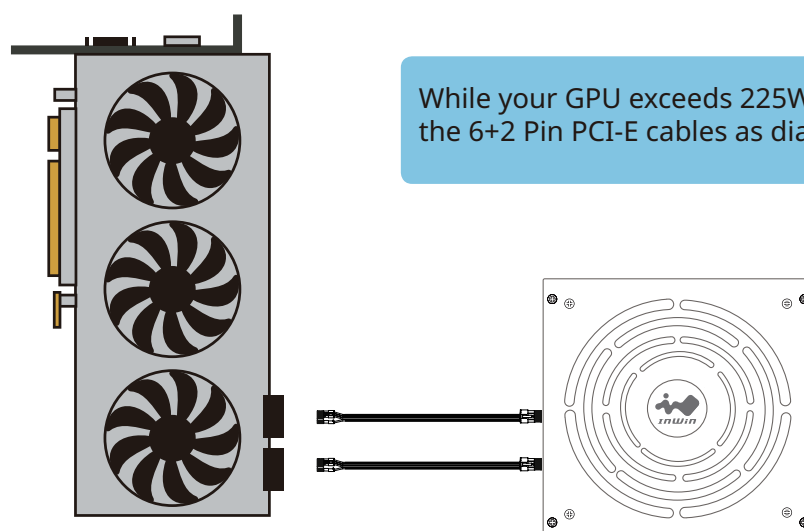
For a quick installation video, please visit [ATX PSU & CRPS Installation](#).

2.3.1 Power Supply Cable Information

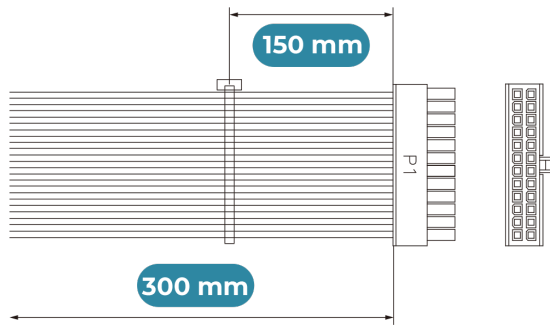
■ 2500W Single PSU Cable Information



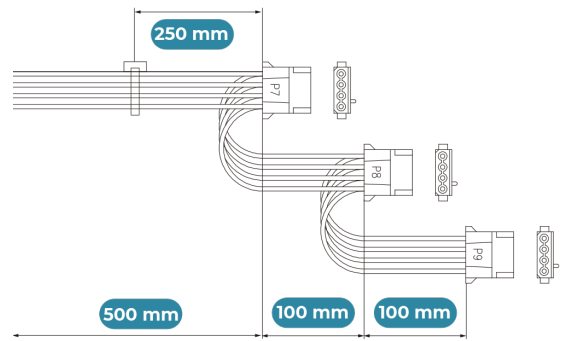
Please use an additional 6+2 Pin PCI-E cable if your GPU exceeds 225W



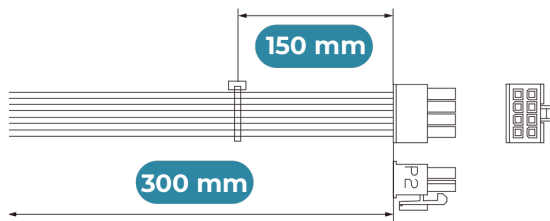
■ 550W 、 800W and 1200W CRPS PSU Cable Information



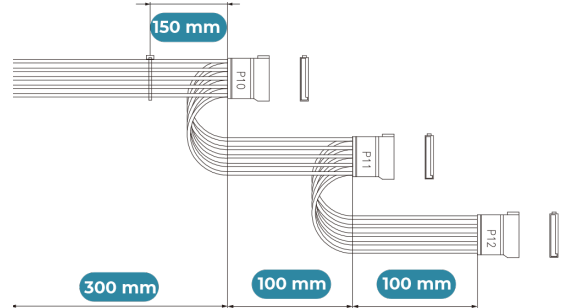
24-Pin Main Power Connector



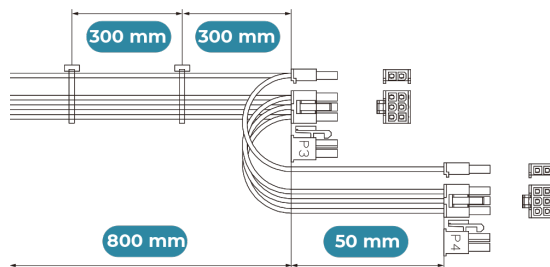
Peripheral Power Connector



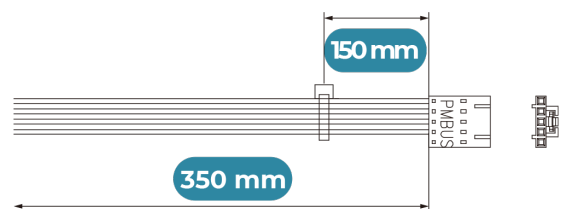
8-Pin CPU



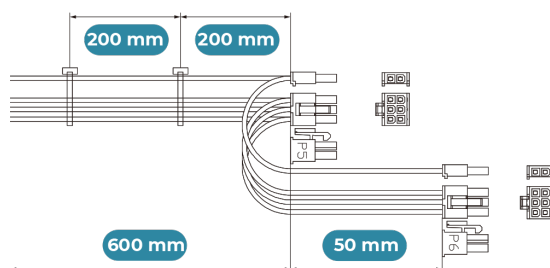
SATA Power Connector



PCIe 6-2 pin X2 GPU

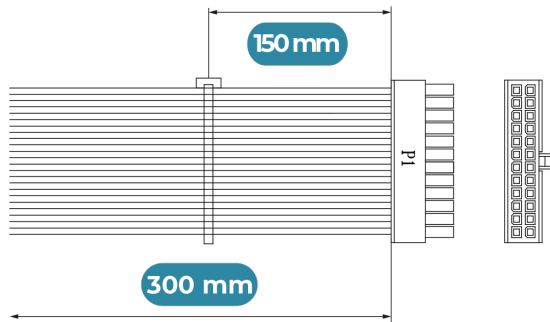


PMBus

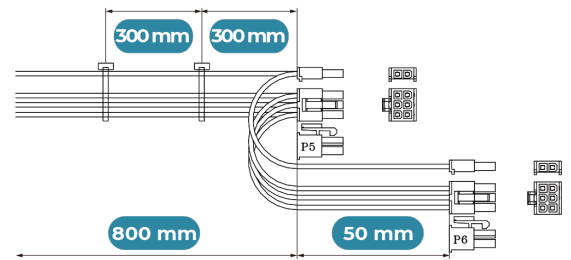


PCIe 6-2 pin X2 GPU

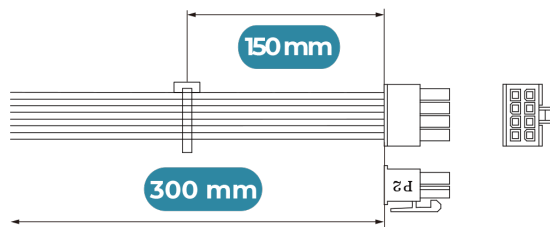
■ 1600W and 2000W CRPS Cable Information



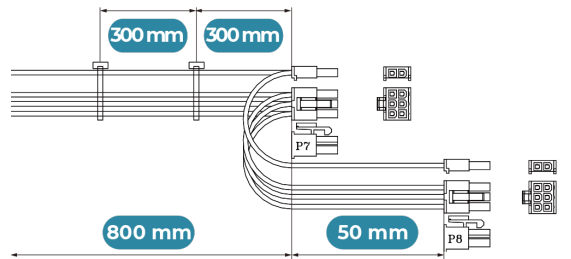
24-Pin Main motherboard



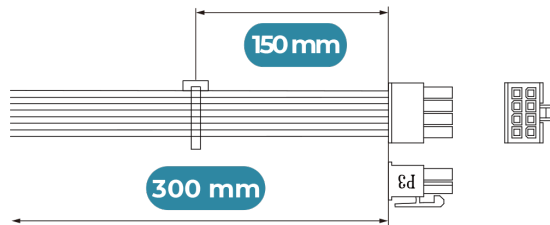
PCIe 6+2 pin X2 GPU



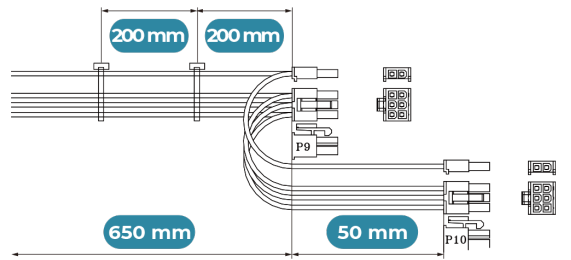
8-Pin CPU



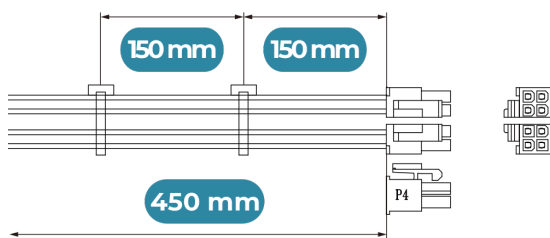
PCIe 6+2 pin X2 GPU



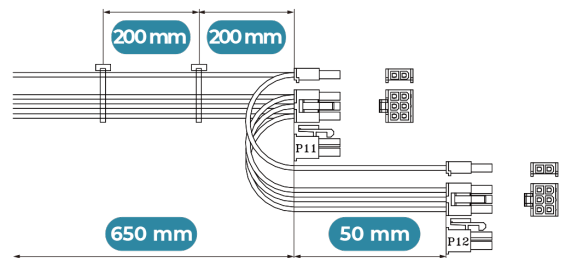
8-Pin CPU



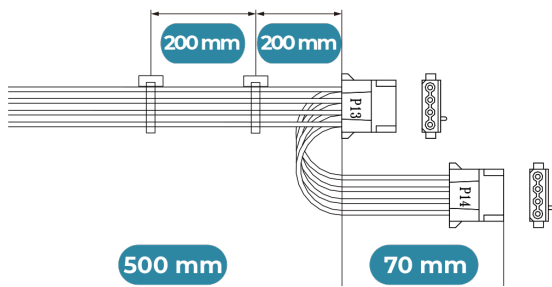
PCIe 6+2 pin X2 GPU



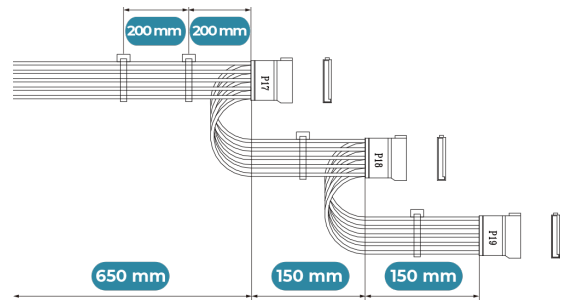
4+4-Pin CPU



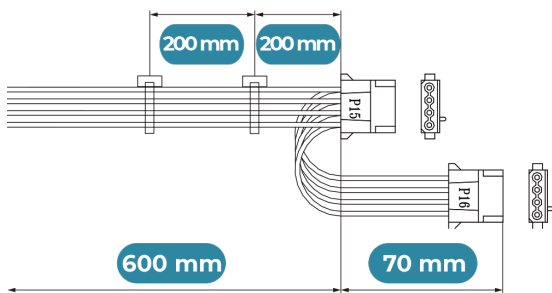
PCIe 6+2 pin X2 GPU



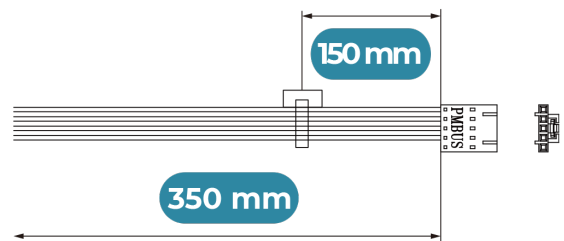
molex 4pin X2 expansion



SATA 15pin X3 internal HDD



molex 4pin X2 expansion

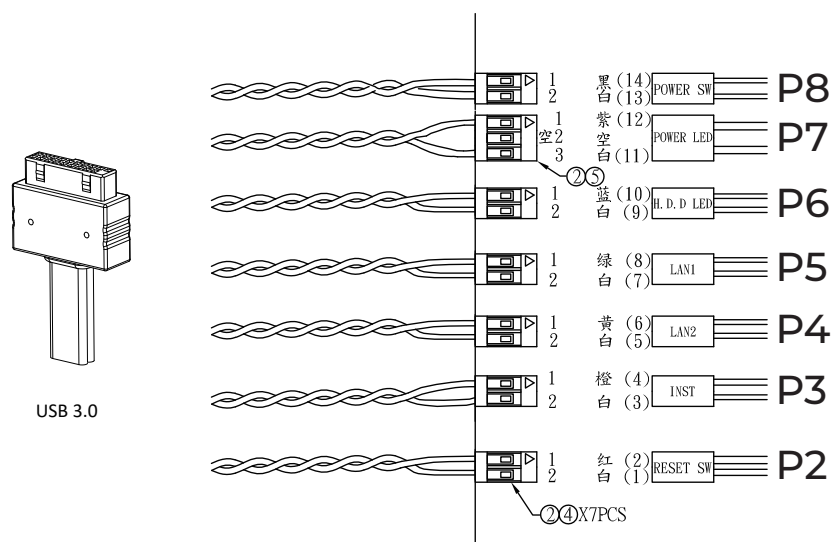


PMBus

2.4 Connecting Cables

Connecting LED Cable, Front Control Panel

Refer to your motherboard user guide for pin functions and locations, and then plug the connectors to the pins on the motherboard to activate the functions.



No.	Connector Name	Abbreviation	Color	Front I/O Indication
P8	Power Switch	POWER SW	White/Black	Power ON/OFF Button with LED
P7	POWER LED	POWER LED	White/Purple	Power ON/OFF Button with LED
P6	HDD LED	H.D.D LED	White/Blue	HDD Active LED
P5	LAN 1 LED	LAN 1	White/Green	LAN LED
P4	LAN 2 LED	LAN 2	White/Yellow	LAN LED
P3	INST	INST	White/Orange	Intrusion Switch
P2	Reset Switch	RESET SW	White/Red	System Reset Button

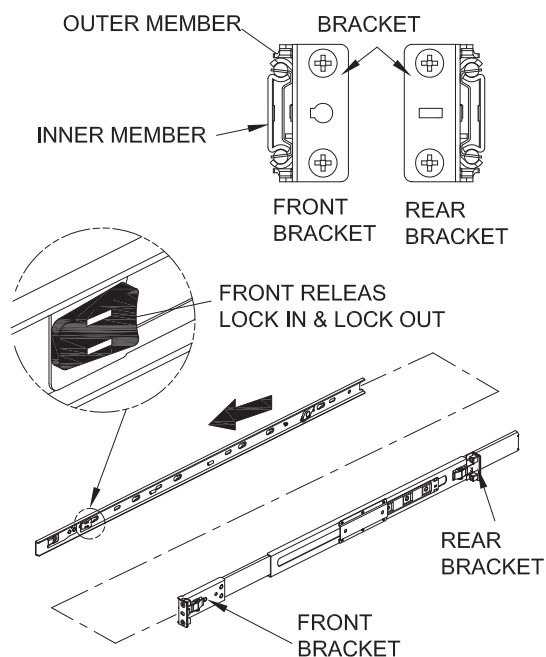
- If the motherboard's led power source is a 3-pin type, please use the 3-pin to 2-pin adapter from the accessories box to connect.

2.5 Installing the Slide Rail

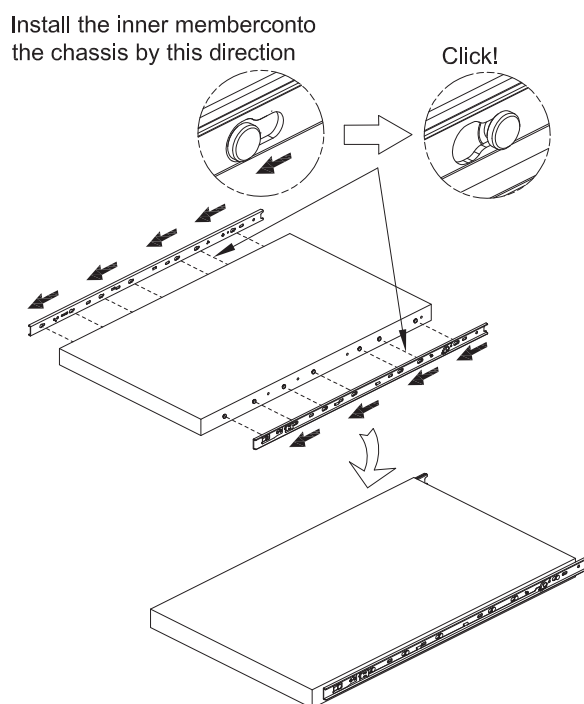
The IW-RL400 supports EIA-RS310D standard cabinets and chassis racks. InWin provides standard slide rails to allow users to mount the chassis onto the cabinets. Or the slide rail by your order might be different. You can reference the quick installation guide inside the slide rail package and follow the instructions to mount the rail onto your cabinet or chassis rack.

2.5.1 Rail Mount

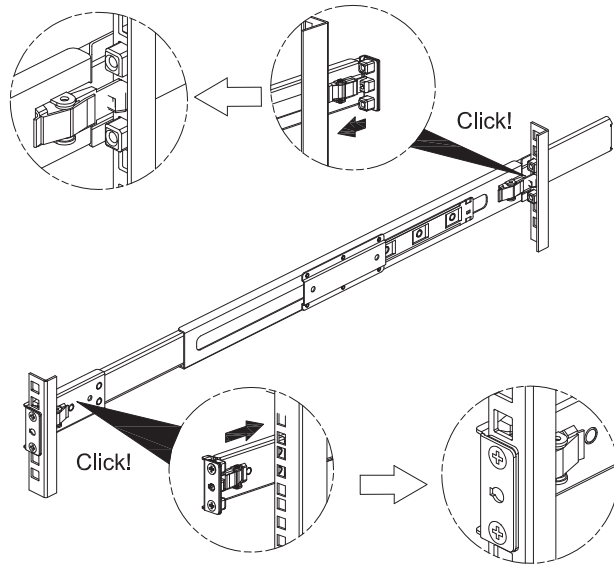
Step 1: Release and detach the inner member from the slide.



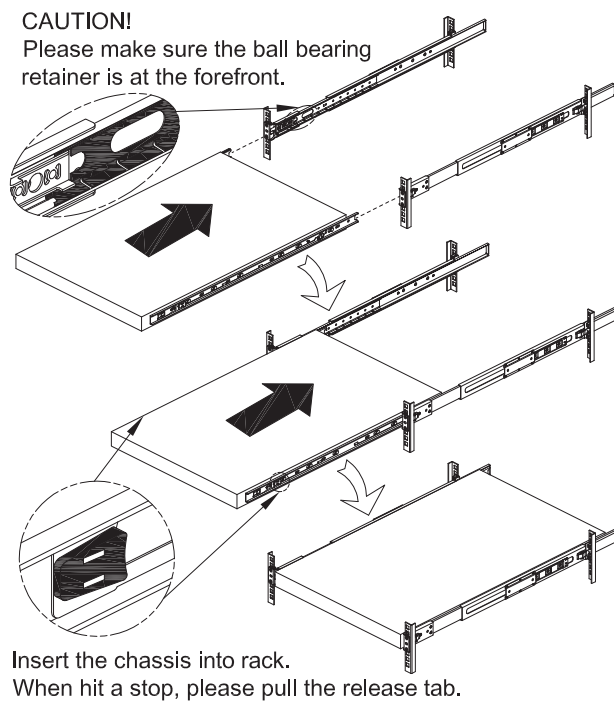
Step 2: Assemble the inner member on the chassis.



Step 3: Install the outer member and bracket on the rack.

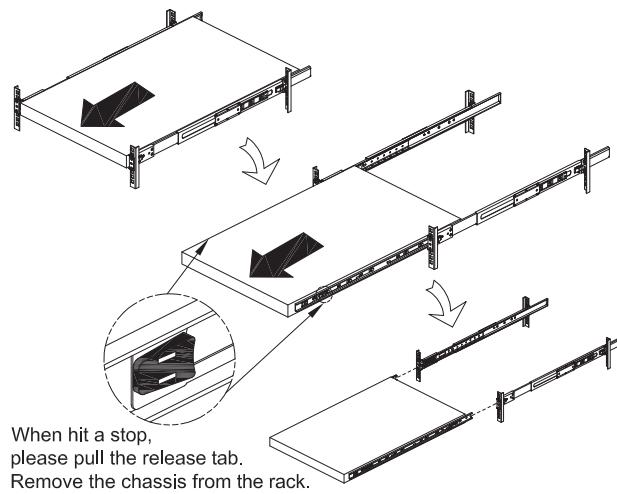


Step 4: Assemble the chassis on to the rack.



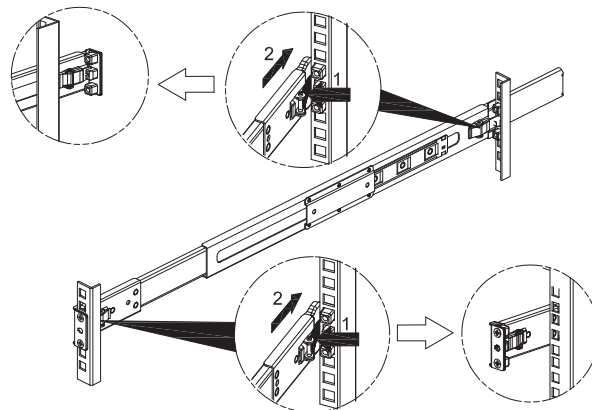
2.5.2 Remove the slide rails

Step 1: Remove the chassis from the rack.

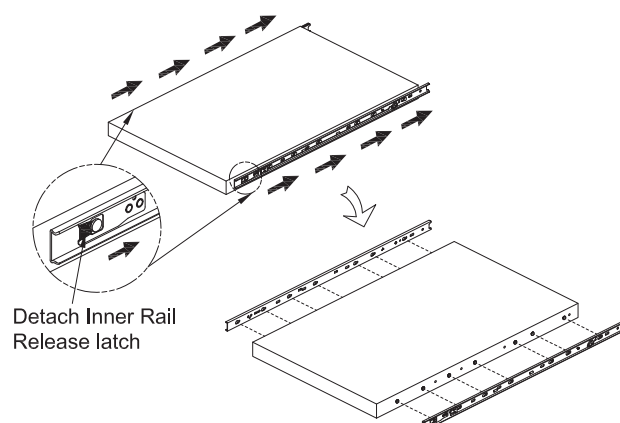


Step 2: Remove the outer rail from the rack.

Detach Bracket From Rack Post
1.Press the latch on the bracket
2.Remove the bracket from rack post



Step 3: Remove the inner rail from the chassis.



3 Compatibility Lists

To reach the best performance and avoid system failure, InWin strongly recommends customers to choose the components from InWin's compatibility list. All the components are tested in InWin's lab, and assured the components are compatible with InWin's chassis. You can download the latest updated device compatibility list from InWin's website: ipc.in-win.com.

4 Technical Support

If you need help with installation or troubleshooting, you can contact your local InWin reps, or send an e-mail to InWin's local contacts for technical assistance.



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